

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, Alexandria, Virginia, 22313-1450 on January 5, 2005.

Rosalie A. Centeno Secretary

In the Application of Udo Emil Frank

Ser.No.:

10/702,219

Filed:

November 5, 2003

For:

MICROFOCUS X-RAY TUBE

Commissioner of Patents

Alexandria, Virginia 22313-1450

## INFORMATION DISCLOSURE STATEMENT

In accordance with 37 CFR § 1.56, Applicant wishes to call the attention of the Examiner to the following references:

- 1) US 6,487,272 (corresponds to JP-2000 306533)
- 2) US 4,870,671 (corresponds to EP 0 366 372)
- 3) WO 01/99478
- 4) DE 196 33 860
- 5) EP 0 77 255

References 1 -3 are in the English language and therefore need no further discussion as to their relevance. In accordance with US Patent law and practice, it is no longer necessary to enclose copies of US patent references.

Reference 4 discloses a method that produces X-ray radiation by accelerating the electrons emitted by the cathode and guiding on a rotating anode to initiate radiation. The target substance located on the rotating anode is applied at timed and geometrically selected intervals in the effective region of the electron beam. The selected time intervals

are produced by interruptions in the target substance, which is moved in the effective region

of the electron beam. This movement is a rotation, arranged in a circle, with the target

substance applied on one or more interrupted traces. The rotational speeds and the

geometric measurements of the target substance, with the interruptions, determine the pulse

width or the pulse train frequency of the x-ray radiation.

Reference 5 discloses an x-ray tube that has an electron source for emission of

electrons and an anode body with a conical through-channel for the electrons, whose inlet

opening which faces the electron source, is larger than its outlet opening. The channel is

arranged and designed so that the electrons are scattered towards the outlet opening when

incident at a small angle on a surface of the channel. A target element is arranged after the

outlet opening in the direction of flight of the electrons. X-rays are formed in the target when

impacted by electrons.

Copies of the listed documents are submitted herewith (other than US patent

references) along with the form PTO-1449.

It is respectfully requested that any fees required and not enclosed herewith or any

shortages in any fees be charged to Deposit Account 02-1653.

Consideration of the foregoing in relation to this application is respectfully requested.

Respectfully submitted,

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RWB/rac **Enclosures** 

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Complete if Known		
	Application Number	10/702,219	
	Filing Date	November 5, 2003	
	First Named Inventor	Udo Emil Frank	
	Group Art Unit		
	Examiner Name		
	Attorney Docket No.	970/001	

U. S. PATENT DOCUMENTS							
Examiner Initials	Cite No.	Patent Number Pub. Number	Issue Date Pub. Date	Patentee	Class	Subclass	Filing Date
	1	6,487,272	11/26/2002	Kutsuzawa			2/4/2001
	2	4,870,671	9/26/1989	Hershyn		-	10/25/1988
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FOREIGN PATENT DOCUMENTS							
Examiner	Cite	Document	Publication	Country or Patent	Class	Subclass	Translation
Initials	No.	Number	Date	Office	!		
	<u> </u>						Yes No
·	3	WO 01/99478	27 Dec 2001	WIPO			X
	4	DE 196 33 860	20 Feb 1997	Germany			Х
	5	EP 0 77 255	04 Jun 1997	Europe			X
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OTHER PRIOR ART B NON PATENT LITERATURE DOCUMENTS					
Examiner	Cite				
Initials	No.				

Examiner	Date	

1/5/2005